USING CONSUMER INFORMATION TO IMPROVE RECALLS

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A full-day conference, co-sponsored by Battelle Memorial Institute and the John Glenn Institute for Public Service and Public Policy, to examine the intersection of 21st century technology and personal privacy.

Abstract

Recalls of consumer products have increased in recent years leading to questions about the efficacy of quality control and crisis management and calls for new policies. This paper considers a more active role for food retailers in recalls. A creative policy proposal forwarded in a recent civil action is explored; the use of information technology to identify which consumers have purchased recalled products. The ability to send targeted risk communication messages to affected consumers fits within general trends in customer relationship management (CRM) making it a possible proactive business strategy for interested retailers. Potential privacy concerns related to the use of consumer information in managing recalls are discussed.

I. Balancing Citizen Privacy and Civil Protection

Public debate in the United States about the balance between public health/(bio)security and personal privacy has reached a level of prominence not seen in the last fifty years. In the post September 11th environment the role of the government in monitoring and managing security in particular is one of the most important and controversial policy questions of the day. Consider, for example, the current debate over President Bush's defense of the domestic eavesdropping program. Food safety issues have become an important aspect of bioterrorism preparedness and resistance, with two of the first three funded Department of Homeland Security University-based Centers of Excellence focused on food chain security.[1] Yet there has been little debate about privacy vs. security issues surrounding novel food safety policy. This paper examines conflicts likely to arise with one such proposed regulatory reform, enhancing crisis management during food recalls by administering targeted risk communication messages.

Food recalls serve as an interesting and important case study of the effectiveness of crisis management and risk communication. Compared to other consumer goods, food products have a short shelf life and therefore require rapid distribution channels. Detection of a risk in a batch or lot of food may occur after the product has left the food processing/manufacturing facility,

[1] National Center for Food Protection and Defense, based at the University of Minnesota and the National Center for Foreign Animal and Zoonotic Disease Defense, based at Texas A&M University.

making a recall necessary.[2] Once detected, random adulteration of a product with a pathogenic bacteria (e.g., *Escherichia coli* O157:H7) or deliberate contamination with a chemical contaminant (e.g., botulinum toxin - see Wein and Liu, 2005) must be ***promptly*** disclosed to relevant supply chain firms and/or consumers if the product has already been marketed. Further, inadequate or ineffective containment or mitigation of food borne risk can lead to potentially significant public health impacts. This acts as a classic example of an externality, whereby firms without policy pressure are unlikely to supply the socially efficient level of risk communication and/or crisis management.

II. Food Recall Data: Responding to Severe Food Safety and Biosecurity Risks

Defective products can cause serious problems for consumers, whether a food product, automobile, pharmaceutical or any other good. In recent years, the number of recalls has risen substantially. Annual automobile recalls in the U.S. have more than doubled since the early 1990s. Nearly 19 million vehicles were recalled in 2002. In 2003, recalls of products such as packaged food, drugs, and medical devices were up nearly 24 percent compared to 1999 (Consumers Union, 2005). Food borne illnesses are a widespread and growing public health problem, affecting up to 30% of people in industrialized counties each year (WHO, 2002). For meat and poultry alone, the amount recalled increased from nearly 6 million pounds in 1988 to about 36 million pounds in 2003. This rise in recalls doesn't necessarily mean that more faulty products are being returned to stores or repaired. Large percentages remain on the road and in the home: almost one-third of all vehicles subject to recall; more than half of the toys, clothes, appliances, tools, and electronics; and three-quarters of all child car seats (Consumers Union, 2005). Teratanavat and Hooker (2004) report that less than half of the meat and poultry recalled in the U.S. between 1994 and 2002 was ever accounted for.

Clearly, products perform differently in recall cases in part due to distinct crisis

[2] Food recalls differ from market withdrawals and stock recoveries. A market withdrawal is the voluntary removal of food products that do not violate a regulation. A stock recovery is the voluntary removal of products that have not been distributed.

management strategies used by government agencies and firms at various stages of the affected supply chain. This is also impacted by the ease of identification of the products being recalled. Consumers can readily distinguish relevant automobile or drug recalls as they hold strong brand recognition for these products and can easily determine if their particular model has been included in the recall. On the other hand, response to recalls of food products may be different. When buying a package of ground beef, consumers may be more concerned about the percent fat content and expiration date rather than the name of the producer. Indeed, much meat and poultry is sold as generic or store/private label products suggesting the importance of store brand and reputation.

III. How Food Recalls Work in the U.S.

Within the U.S. Department of Agriculture (USDA) recalls of meat and poultry products are monitored by the Food Safety and Inspection Service (FSIS).[3] Recalls are initiated by the manufacturer or distributor, sometimes at the suggestion of FSIS. All recalls are voluntary. However, if a company refuses to conduct a recall, FSIS has authority to detain and seize those products in commerce and withdraw inspection, effectively closing the plant (FSIS, 2004). When a recall case is initiated, FSIS uses mass risk communication tools to notify the public through a press release and a Recall Notification Report (RNR), both of which are posted on the FSIS Web site. The press release is issued to media outlets in the areas where the product was distributed, and is also disseminated through an email listserv. When possible, FSIS also includes pictures of the recalled product and a link to the recalling company's Web site as part of the press release. When there is reason to believe that adulterated or misbranded product has entered commerce, the FSIS Recall Management Division convenes the standing Recall Committee. The Committee, consisting of FSIS scientists, technical experts, field inspection managers, enforcement personnel and communications specialists, evaluates all available information and then makes recommendations to the company about the need for a recall.

[3] USDA takes lead for meat, poultry, and processed egg products and primarily inspects slaughter and processing operations. FDA is the responsible agency for all other foods sold in interstate commerce.

If the Committee recommends a recall, it also classifies the event based on the relative health risk:

Class I - Recalls involving a hazard where there is a *reasonable* probability that eating the food will cause health problems or death. Examples include meat and poultry that may be contaminated with pathogenic bacteria, such as *Listeria monocytogenes* in a ready-to-eat product or *Escherichia coli* O157:H7 in raw ground beef. Also, adding allergens, such as peanuts or eggs, as an ingredient in a processed meat product without listing them on the label would justify a Class I recall as would most potential biosecurity threat agents.

Class II - Recalls involving a hazard where there is a *remote* probability of adverse health consequences from eating the food. An example of a Class II recall would be the presence of dry milk, a minor allergen, as an ingredient in sausage without mention of the ingredient on the label.

Class III - Recalls involving a situation where eating the food will not cause adverse health consequences. An example would be improperly labeled processed meat in which added water is not listed on the label as required by Federal regulations.

All recalls are supported by the same type of FSIS risk communication message, regardless of the class.

In addition to determining the class of the recall, the Committee also verifies that the company has identified production and distribution information to facilitate the recall. RNRs (available online at http://www.fsis.usda.gov/Fsis_Recalls/index.asp) include information about production dates, identifying codes, recalling company name, States where the report of incidents took place, products, reason and description, size of recall and recovery in pounds (upon completion and closure of the recall). The RNR also reports the notification level or stage of the supply chain that the contaminated food has reached. There are four such levels (FSIS, 2004):

1. **Wholesale:** The distribution level between the manufacturer and the retailer. This stage may not be encountered in every recall situation; i.e., the recalling firm may sell directly to a retailer or to consumers.

2. **User:** includes hotels, restaurants, other food service operations and institutional consignees.

3. **Retail:** includes all retail sales of the recalled product.

4. **Customer:** includes household consumers, as well as all other levels of distribution.

During the recall FSIS field enforcement personnel conduct "effectiveness checks" by contacting consignees to ensure that the recalling firm has made all reasonable efforts to notify its supply chain that there is a need to remove the product(s) from commerce (FSIS, 2004). Once FSIS determines that the recalling firm has indeed made all reasonable efforts to contact consignees and to conduct an appropriate (based on the public health impact) crisis management plan the Agency notifies the firm that the recall is complete and no further action is expected.

Clearly, retailers are not simply passively involved in recalls. By reviewing meat and poultry recall data (1998-2004) it can be seen that approximately two-thirds of all recalls involved notification at the retailer and consumer levels (Shang and Hooker, 2005). However, most retailers do not actively disclose to consumers that product sold in their stores may have been part of a recall, nor do they usually attempt to track down recalled food that has already been sold.[4] Retailers may be unwilling to have their names linked to "contaminated food" disclosures even if they are not responsible (or liable - see the discussion of the QFC case below) for the contamination.

There have been calls to encourage retailers to play a more active role in food recalls. For example, a former USDA acting Undersecretary for Food Safety committed the Department to prepare a regulation which will make available to the general public the names of likely retail consignees of recalled products. He asserted that authority for USDA to release such information would be forthcoming, thereby addressing concerns that, given the voluntary nature of recalls, USDA (or FDA) currently has no legal right to disclose names of consignees (Fabi, 2005). The authors have used survival analysis of critical timing measures for recalls at various levels of distribution to show that such disclosure may benefit public health through a more rapid

[4]There are certainly exceptions, such as a recent observation at a Kroger store - a point-of-sale sign informing consumers about the December, 2005 ARMOUR, Lunch Makers® recall.

detection of contaminated foods (Shang and Hooker, 2005). As an additional element of retailer involvement, this paper considers the post-purchase phase of recalls in an effort to increase the recovery rate (Teratanavat and Hooker, 2004; Shang and Hooker, 2005). This study fits within a more general analysis of how to improve crisis management by applying a customer relationship management (CRM) strategies.

IV. Propose. Using Retailer Databases to Track Recalled Food

A class-action lawsuit has been brought in Washington State, claiming a grocery store chain - Quality Food Centers (QFC, a subsidiary of Kroger) should have used information gathered through its loyalty program to warn those consumers who purchased product linked to a cow diagnosed with BSE in December 2003 (a Class II recall). The suit claims that even though QFC had the ability to quickly warn customers the grocery store neglected to do so. The suit seeks unspecified damages for the plaintiffs, as well as the establishment of a medical monitoring fund. In June 2004, QFC was denied a petition to dismiss the case, which is currently pending (Superior Court of the State of Washington for King County, No.04-2-05608-0 SEA). However, two of the three aspects of the plaintiff's position argued that QFC acted as a "manufacturer" of the ground beef product sold. These two elements were firmly rejected by the court. The retailer did not change the nature of the product, which was adulterated prior to arrival at QFC stores. The third element of the case, "liability as a "product seller" whose negligence proximately caused harm to plaintiffs" stands, and is being considered further.

Though not suggested in the civil action, if loyalty/affinity program information were used, targeted risk communication messages could be sent to consumers who have purchased recalled product. This could occur through an email system, regular mail, or by using some form of checkout messaging during subsequent transactions (e.g., a prompt from the cashier or a written warning on a coupon-printing system). Such efforts would aim to increase the proportion of recalled product recovered, and hence address public health risk *ex post.* Clearly, not everyone

is a member of a loyalty program.[5] Alternative sources of consumer information include Federal or state food assistance programs (food stamp, WIC, etc.) or credit/debit card purchases. All share privacy concerns, particularly relevant for food purchase history, which would have to be balanced against potential public health gains.

In 2004, there were 34,252 retail stores with annual sales of at least $2m in the U.S. Sales per customer transaction averaged $24.64 in 2004 (Santella & Associates, 2004). As the closest point to customers in food supply chains, retailers have the most convenient access to consumers. Moreover, to enhance their community image, retailers have been attempting to build customer loyalty applying a range of CRM strategies. Going past publication of a recall flyer in the store, retailers can adapt such CRM systems to facilitate more effective food recalls. Specifically, once FSIS publicizes a recall, retailers who have been identified as selling the units listed in the RNR can use customer transaction records to track down those who have already purchased the recalled product.

V. Is the Technology Available?

Do retailers have these kinds of records available? If so, do they have the necessary information technology (IT) to link transaction data with recalled products? Many grocery stores/supermarkets do track customer transactions as part of their CRM strategies. To link this data to consumer information, retailers encourage customers to join a program that usually provides some form of promotional benefit (e.g., coupons for money-off food or gas). Such frequent shopper programs (FSP), as a part of a retailers customer relationship management and marketing programs, are increasingly common.[6] They are designed to generate store brand loyalty and cultivate a long-lasting relationship with customers. They help to retain existing customers, acquire new customers and increase frequency of visits, stimulate faster purchase

[5] A recent study by TDLinx suggested 13,000 grocery stores offer loyalty cards, approximately 39% of all U.S. stores accounting for 45% of all supermarket sales (reported online at http://www.santella.com/news&views.htm, October, 2005).

[6] ACNielsen's *9th Annual Frequent Shopper Survey Update* suggested that in 2005 some 82% of households were members of at least 1 program (reported in GroceryHeadquarter.com, September, 2005).

cycles and add value for the store. FSP enable retailers to track individual purchases over time. Therefore FSP provide the necessary information for tracking recalled food products, since customers have to provide contact information to retailers when joining the program. Interestingly, a leading consulting firm suggested that "Frequent shopper data is the most underutilized asset in the consumer packaged goods industry today" (Santella & Associates, 2004). Approximately 30% of retailers FSP cardholders represent 80% of the programs total sales. About 98% of retailers say FSP enable them to promote customer loyalty and 80% of retailers say FSP enable them to gain information on shoppers.[7] A large volume of food transactions can be linked to consumer information using retailers' existing FSP and CRM systems.

Another retailer transaction-support tool that could be used to link recalls and consumer information is the food stamp system. Approximately 32,000 supermarkets in the U.S. accept food stamps.[8] Food stamps are part of various welfare programs, and provide non-cash benefits for certain food products to lower income recipients and their families. The food stamp program is still transitioning to the Electronic Benefit Transfer (EBT) system (i.e., the numbers of states and retailers with capability to process EBT payments are increasing). Thus a greater proportion of recipients will be able to use the credit/debit card-type payment system. The advantage of EBT for the policy proposal considered here is that individual transactions can be linked to consumer information in a manner similar to that discussed above for FSP. 2003 estimates of EBT coverage were 95% of all benefits, delivered to 8.4 million households (FNS, 2003).

Other than FSP and food stamp programs, retailers could also link transaction data and consumer information by partnering with credit/debit card companies.

VI. Value in Customer Relationship Management

There are various definitions of CRM, ranging from the practical tools-based implementation of specific technology solutions to a holistic approach to managing all aspects of

[7] **Source: Santella & Associates** www.santella.com
[8] **Source:** http://foodindustrycenter.umn.edu/

customer relationships which simultaneously create value for both customers and the firm (Payne and Frow, 2005). The marketing literature discusses how companies have developed CRM strategies to enhance firm performance (e.g., Boulding, et al., 2005). Researchers have examined; (1) CRM data-related techniques, (2) marketing strategies for customer profitability, (3) the balance between customer acquisition and retention efforts, (4) effective CRM implementation, and (5) strategic choices that are associated with the effective deployment of CRM (Srivasan and Moorman, 2005). Most of the studies provide a corporate finance point of view analyzing how to increase firm and consumer value. In this application, the retailer can be seen as the "gatekeeper" of food safety and biosecurity information, disclosing to targeted consumers that an elevated risk may exist. Such customer benefits should eventually create value for firms (retailers) through an improved corporate image and enhanced customer loyalty.

There are three types of relationships between a customer and a supplier: acquaintances, friends and partners (Johnson and Seines, 2004). For a customer, an acquaintanceship is effective as long as the supplier provides the product in a satisfactory way at a price that is perceived as fair. As suppliers move from supplying parity value to differential value, the exchange relationship transforms from acquaintance to friendship. In partnership, trust is necessary but not sufficient. Suppliers must use individual customers' information to provide highly personalized and customized offerings (Edvardsson, et al, 2000). This suggests that to move towards an environment which links transaction data and customer information and then delivers some form of targeted risk communication when called for it is necessary for consumers to believe they have entered a partnership with the retailer.

It may be fair to characterize the current nature of consumer-retailer relationships as the "friendship" level. Frequent, returning customers become familiar with retailers, and start to trust that they provide superior value. In moving to the friendship level, the customer also provides more information to suppliers facilitating enhanced communication and permitting the use of the information to improve products and services (Kohli and Jaworski 1990; Narver and Slater, 1990) as advanced in supply chain management systems. In the application considered in this paper,

this can be achieved by providing personal contact information to retailers, as well as updating this information in a timely manner. When customers see the benefits of the disclosure system and believe being contacted by retailers can help them better protect themselves, trust can be built between customer and supplier and a partnership observed.

VII. Privacy Concerns

The policy proposal appears to be technologically feasible, but it inevitably involves privacy issues. With increasing apprehension over identity theft and government spying on citizens, people have become more and more concerned about protecting their privacy and how corporations use their personal information. Many are now reluctant to share personal information, such as phone numbers, home address, birthday or SSN. How can retailers handle consumer information and purchase records in a secure way?

Businesses are obligated to handle customers' personal information in an appropriate manner. The use of new information technologies has provided the opportunity for improved market segmentation and targeted marketing. However, the marketing profession faces ethical conflicts because the application of these technologies commonly invades consumer privacy (Foxman and Kilcoyne, 1993). First, consider a definition of consumer privacy. It is the consumer's ability to control the (a) presence of other people in the environment during a market transaction or consumption behavior, and (b) dissemination of information related to or provided during such transactions or behavior to those who were not present (Goodwin, 1991). Privacy is a very individual notion. 95 percent of people consider marketers contacting consumers solely for profit motives to be unwelcome and would like to prevent it (Bloom, Milne, and Adler 1992; United States Code 1991). In situations that personal information has been used, researchers have proposed privacy policy recommendations, such as "citizens to be informed and given choice about using the technology" (Canadian Telecommunications Guidelines, 1992), "allow consumers to tell marketers whether they want to be on a mailing list; pay consumers for information" (Goodwin, 1991), "minimizing intrusion into individuals' lives, disclosing the

nature and extent of government records, and creating enforceable privacy laws" (Privacy Protection Commission, 1977). The "Can-Spam" and "Do not Call" polices in the U.S. highlight consumer interest in opt-out protection.

Public policy and self-regulatory efforts to alleviate privacy concerns should provide consumers with more control over the initial gathering and subsequent dissemination of personal information. Such efforts must also consider the type of information sought, because consumer concern and willingness to provide marketers with personal data varies dramatically by information type (Phelps, et al., 2000). For example, in tracking recalled food purchases sensitive information such as SSN does not have to be requested, alternative individual identifiers (e.g., FSP number) can be used. Moreover, as the policy aims to contact customers using the timeliest manner of targeted risk communication possible email may be a preferable system, suggesting care would need to be taken to avoid the appearance of "junk mail." Retailers should also stress that the information would only be used to protect consumers and that it will not be released (or sold) to other organizations. The need for such disclaimers and information would likely require consumers re-apply for, or update their existing, FSP agreements.

VIII. Tactics to Minimize Privacy Concerns

No public policy, regardless of its intention, can be effective without the support of key stakeholders. To elevate privacy concerns it is critical that customers' transaction data is used appropriately by retailers during food recalls, and thereby make sure customers willingly cooperate. Consider three aspects: technology, legalization and education:

1. Technology

As mentioned above, many retailers already record transaction data, some of them have even started linking it to consumer information in their CRM programs. How can concern over retailer abuse of this information be minimized to ensure consumers maintain the partnership? One solution is the development of dual information systems. One would be used to maintain customers' personal contact information, assigning a unique number to each consumer or

household. The other system would track each customer's purchase record using the same identifier number. Therefore, customers' name and contact information are not normally associated with their purchases. A link between the two systems is only permitted for the purpose of providing targeted risk communication messages.

2. Legalization

This policy proposal would likely require new laws to ensure retailers do not use customers' personal information for purposes other than food recall risk communication. In addition, a mandatory rule would likely require new authority for USDA, or more likely FDA, to implement and monitor a retailer-level program, an environment currently supervised at the State level in most instances.[9] We leave for future debate the possible exemption of food sales at convenience stores, vending machines and food service operations.

3. Education

To help eliminate customer privacy concerns related to this proposed policy, an educational campaign could be designed and disseminated to show a) how food typically becomes contaminated (e.g., at the manufacturing/processing plant, during transportation, or in further food preparation) indicating that retailers themselves may not have contributed to the enhanced level of risk, and b) how the new disclosure process will work (the dual information system and the legal authorization).

IX. Benefits and Costs of using Consumer Information

Cost benefit analysis can be used either as a "gatekeeper" to determine whether a policy creates net benefits and should be adopted, or in "rule design" to optimize a regulation. In such analyses, firm level costs of this policy would include the ***additional*** management of loyalty databases (above and beyond that currently used for CRM marketing purposes) and the actual linking of contact information and notification processes adopted. Hypothetically, some of these tasks could be managed by a third party (which may not be the government), in particular the

[9] See Caswell and Kleinschmit (1997) for one discussion of Federal preemption of food safety policy.

final step of targeted risk communication. Government costs of such a notification policy would arise from oversight/monitoring of the process and public education and outreach costs to mitigate concerns over privacy. Benefits may accrue to firms through heightened public trust in a store brand or supply chain. Public health benefits may arise through reduced food borne illness and death arising from a more complete and quicker resolution of recalls. The cost of this proposed policy is anticipated to be relatively small, since many (large) retailers already have access to transaction data and a degree of (however imprecise or out of date in its current form) personal information in their CRM databases.

X. Conclusions and Future Work

Poor consumer awareness about recalls of contaminated food products can lead to public health impacts which may be reduced through more aggressive crisis management efforts. One *ex post* option considered in this paper is the application of information technology to identify consumers who have purchased recalled food followed by the administration of targeted risk communication messages. This linking could occur through the use of consumer loyalty/affinity programs, government food stamp identifiers, or credit/debit card records. Such a program could be used as an element of retailers CRM strategies.

This paper suggests that sufficient technology is available in a large share of the food retailing industry. Appropriate, secure maintenance and use of such consumer portfolios is critical in building customer's trust and a sense of partnership. Retailers and regulators should pay special attention to such concerns if such a policy is to become feasible. Privacy issues surround each of these sources of information and may dominate any potential societal benefit.

Regardless, the intent of this paper is to provoke further analysis and discussion of such alternative targeted risk communication strategies which may be applied to enhance crisis management efforts for other consumer products or other terrorism events.

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Discussant Response
By Robert L. Scharff[10]

Hooker and Shang have clearly and accurately described an area in which current practices deserve re-examination given recent changes in the technological and legal landscape. One of the most common criticisms of the existing food recall system has been that it operates too slowly and is often ineffective (GAO 2004). The Hooker and Shang solution to this problem is to disseminate recall information using retail customer databases. Ideally, given technological advances, information about potential risks can be targeted specifically towards those persons who actually purchased the recalled product. This approach has a great deal of promise and is now more feasible with the passage of the Bioterrorism Act of 2002.[n] Nevertheless, there are a number of issues that deserve further consideration.

Privacy Concerns

In the post-9/11 world, there has been a marked decrease in privacy protections. For example, the ability to trace foods to the retail level has been enhanced by the registration and recordkeeping requirements in the Bioterrorism Act of 2002. Though there was a desire for these requirements prior to 9/11, the privacy concerns at issue for retailers had acted as a formidable impediment to the requirement.[12] More recently, the Justice Department has obtained individual users records of searches from most of the major internet search engines. The outcry accompanying this latest move by the Bush Administration highlights the fear that many Americans share over how the government will use personal information against citizens.

The privacy of the shopping decisions of supermarket customers is no less important. Like searches made on the internet, records of what you purchase at a supermarket would

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[11] Sections 305 and 306 of The Bioterrorism Act of 2002 (PL107-188) require that all food facilities register with the government and keep records for inspection. This will allow government agencies to quickly trace adulterated foods to all retail establishments selling the food. Nonetheless, because retail establishments are exempted from this statute, there is no requirement that customer databases be kept. Thus, the Hooker and Shang proposal will only apply to those retailers that voluntarily keep customer databases.

[12] Even after 9/11 food manufacturers opposed the registration requirement in the Bioterrorism Act. See "Food manufacturers Oppose Bioterrorism Legislation," Food & Drink Weekly, Dec. 17, 2001.

provide an observer with personal information about your health, bad habits, choice of reading material, and sexual practices. For fear of how the government might use this information, many consumers would be opposed to any policy that made it easier to use this information.

Hooker and Shang's treatment of privacy concerns is generally good. However, the paper could be improved by clarifying the distinction between retailer and governmental responsibilities towards privacy. In many cases, the retailer's duty may be contracted around ex ante by the consumer to allow for the dissemination of otherwise private information. An executive branch agency, on the other hand, can intrude upon an individual's privacy ex post, but only if it has statutory authority to do so and the act is not in violation of the United States Constitution. Hooker and Shang accurately describe the boundaries that face private firms. They note that a retailer may need consumers to agree to an updated privacy policy before the retailer can, on its own, use the data to inform consumers about pending recalls. Nevertheless, the discussion of policy options could be improved by an examination of the statutory or constitutional limitations facing the government. In considering government action, the paper does not explain what changes in legislation, if any, would be needed to allow for the use of consumer databases when the privacy polices of the companies do not allow for such use. A looming legal question is whether legislation could be crafted that would both preserve the current system of voluntary recalls and, at the same time, allow retailers to violate their privacy policies when matters of public health are at stake.

The Incentives of the Manager of a Retail Establishment

Hooker and Shang suggest that the primary means of promoting risk communication should be through private action by retail establishments. They suggest that retail establishments have an incentive to build into their customer relationship management (CRM) programs the targeted use of consumer data to communicate with those that have purchased recalled products. Although the paper examines some of the incentives that managers contemplating such a move

may consider, the authors might also want to examine other economic and legal considerations that managers may wrestle with.

First, because most recalls deal with products that present little real risk of harm to consumers, a manager has to balance the speculative risk of bad publicity and legal liability (if someone is harmed) against the net reputational harm that will occur when specific customers are contacted. The authors suggest that the net reputational harm will be negative because the consumer trust generated by the retailer's recall program will lead to a stronger relationship between the retailer and consumers. Often times this may, indeed, be the case. However, this conclusion is premised on the supposition that all or most consumer-retailer relationships can be characterized as being on a "friendship" level. When a manager is faced with relationships better characterized as being on the "acquaintance" level[13] or there are a variety of different types of relationships, the manager may correctly see that notification of consumers may result in losses from scared consumers that exceed benefits from reassured consumers.[14] Furthermore, if ex ante knowledge about the recall is low, the effort to contact consumers may result in the generation of unwanted negative publicity. In either case, the net effect would be a reputational hit. Nevertheless, the authors' policy suggestion is likely still a good one for retail establishments that market themselves primarily based on customer relations.

Second, the manager must consider the legal ramifications of a decision to use consumer data to aid in recalls. In addition to the privacy concerns mentioned above, the voluntary use of the data in the short term may create a legal duty to do so in the long term. If the members of a frequent shopper program come to expect to be notified when a recall has been announced, those persons may rely on the store to inform them of such activity. Ultimately, persons harmed when a

[13] For example, many who use larger supermarkets or warehouse stores expect a basic level of safety at low prices. This appears to meet the authors' definition for an acquaintanceship relationship.

[14] Johnson and Seines (2004) explain how it is not always in a firm's best interest to build customer relationships. A retailer facing different types of customer relationships must weigh the sometimes offsetting effects of a decision on diverse consumer groups.

store does not act (or does not act fast enough) may have a better case against the store in civil litigation if the harmed person can show a reasonable expectation of being warned.[15]

Economic Effects on Consumers

The main thrust of the Hooker and Shang paper is that consumers will generally benefit from health and safety information that is provided to them. To a degree this is true. However, privacy concerns create other incentives for consumers. Most obviously, if consumers do not believe that their data will be kept confidential, some will opt out of membership in frequent shopper programs. To a certain extent this will happen regardless of what policymakers do to reassure the consumers.[16] Perhaps more importantly, once it becomes known that consumers will be notified when recalls are announced, it is likely that some form of moral hazard will occur. For example, if a consumer believes that she will always be personally notified when an item of food she has purchased is recalled, that person may stop paying attention to local media reports of recalled products. If the recall system is imperfect (as it surely would be) that person may fail to take necessary self-protective measures they otherwise would have taken. Even worse, if the consumer mistakenly believes that the recall system will eliminate most or all risk from food products, she may fail to take even more basic self-protective measures, such as using temperature control in the preparation of foods that may harbor dangerous pathogens. To some degree, consumer education can be used to clear up the misperceptions that would lead to both the moral hazard problem and the consumer opt out problem. In any case, it may well be that the social costs due to the opt-out and moral hazard problems pale in comparison to the benefits from the provision of health and safety information.

[15] See the Restatement (Second) of Torts, §323, which states: "One who undertakes, gratuitously or for consideration, to render services to another which he should recognize as necessary for the protection of the other's person or things, is subject to liability to the other for physical harm resulting from his failure to exercise reasonable care to perform his undertaking, if

(a) his failure to exercise such care increases the risk of such harm, or

(b) the harm is suffered because of the other's reliance upon the undertaking."

[16] The desire of many to protect privacy by opting out of information sharing agreements has become so prevalent that the Center for Democracy and Technology has created a homepage dedicated to facilitating consumer's efforts to opt out of these agreements. http://opt-out.cdt.org/.

Industry Response

The previous discussion may suggest to some that greater regulatory control of the recall process is needed. However, it is important to remember that, in the near term, there is unlikely to be a requirement that all food purchases of individuals be recorded and tied to those individuals. Customer databases are and will continue to be voluntary. As a result, retailers will always have the option of discontinuing operation of these databases if the costs imposed from regulatory action are too great. To the extent that frequent shopper programs enhance social welfare by allowing for price discrimination,[17] loss of welfare from the shutdown of these programs may exceed increased welfare from the imposition of regulatory authority. More research is needed to predict the market reaction to such a regime.

Conclusion

Hooker and Shang have made an important contribution with their fascinating working paper. It is clear that technology has the potential to improve food product recalls by allowing the direct contact of consumers that have purchased recalled products. I look forward to reading a future version of this paper that addresses the legal and economic issues raised in this note.

[17] Whether welfare is actually created by such programs is debatable (Bell and Lal 2002).

References

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